Seattle Sandwich, Inc.: Short Case

This handout provides information for one part of a larger case that is currently being developed by Susan Wolcott (swolcott@WolcottLynch.com) and Matthew Sargent (matthew.sargent@uta.edu) for the AICPA.

This handout includes:

- A very short case that could be used during an introductory management accounting course or as a refresher at the beginning of an intermediate management accounting course.
- Examples of student responses to the short case with comments to assist faculty in assessing the underlying student thinking.
- Rubric completed for each student response (AICPA Faculty Guide: *How to Help Your Students Become Better Critical Thinkers*, Figure 20).

Note: Future versions of the Seattle Sandwich case will include different pieces of information and questions designed for different levels in the accounting curriculum. Additional information will include: the annual budget, budget variances, issues related to production cost estimation, issues related to performance measures, and data analytics.

If you would like to test-use one or more future versions of the case in your course and provide feedback to the authors, please contact Susan Wolcott (swolcott@WolcottLynch.com)

Short Case Assignment

Seattle Sandwich: Budgeting Hourly Production Labor Costs

You have recently been hired as an accounting intern by Seattle Sandwich. The company makes and sells 7 types of sandwiches to approximately 40 customers that operate lunch carts in or near downtown Seattle. Your first work assignment is to assist in development of next year's budget. In particular, you are having difficulty deciding how to budget production labor costs. The production manager sets a weekly schedule for hourly workers, adjusting the schedule as needed for changes in sales volumes. In addition, the production manager can send workers home early if sales are lower than expected or if production goes more quickly than usual. In previous budgets, hourly labor was treated as a variable cost. However, a certain number of workers is generally needed, and the manager is reluctant to send workers home early too often for fear of losing good employees. Accordingly, you are wondering whether hourly labor costs should be treated as a fixed cost in next year's budget.

Required:
Provide your recommendation about how hourly labor costs should be treated in next year's budget.

Comments About the Assignment Design

The assignment shown above was designed for students at the beginning of an intermediate management accounting course. (However, it would also be appropriate for an introductory management accounting course) The main purposes were to (1) require students to review and apply terminology about cost behavior and (2) introduce students to the critical thinking rubric.

This short version of the Seattle Sandwich case intentionally excludes numerical information. The goal is to have students think about cost behavior concepts and apply them to an easily-understood business situation. Students should be able to imagine a production process for making sandwiches. The short case scenario provides them with explicit information suggesting uncertainty about how the costs should be classified.

The short case introduces the terms ”variable cost” and ”fixed cost” but intentionally does not provide other relevant terms (such as mixed cost). Students are expected to draw on knowledge from their prior course and their textbook to refresh their memories about terminology and concepts that would be appropriate when responding to the case question.

Seattle Sandwich Short Case: Student #1

Classroom context: Student #1 was given the case as a take-home assignment and was told to write one paragraph.

My idea would be to make it a variable cost and not change it. Since there is no set amount of time someone could be there they cannot be certain it would be a fixed cost. For this reason it would have to stay as a variable. No matter how much they can try to make certain set hours, it would be divided among several people instead of one. For this reason it would be hard to make it a fixed because it would involve several accounts as opposed to one set account.

Comments about the approach and underlying thinking used by Student #1:

- Does not explicitly identify the problem being addressed.
- Identifies uncertainty about amount of worker time (as stated in the case) and uses it as a ”fact” for continuing the existing method. However, the student also denies uncertainty, suggesting the student does not understand that the cost classification is uncertain.
- Discussion suggests that the student understands the basic difference between fixed and variable costs.
- Provides illogical/confusing reason against a fixed cost classification, perhaps because the student did not identify the possibility of a mixed cost classification.

- Overall: the student seems to seek a single, ”correct” answer.

Assessment of Student #1 Response (detailed ratings highlighted in yellow) Overall Rating: 1

Component of Critical Thinking Model	Stage 1 Little/No Critical Thinking (Confused Fact-Finder)	Stage 2 Partial Critical Thinking (Biased Jumper)	Stage 3 Emergent Critical Thinking (Perpetual Analyzer)	Stage 4 Competent Critical Thinking (Pragmatic Performer)
Identify	• Recites purpose as given, or • Identifies an inappropriate problem	• Identifies the clearly-evident problem • Recognizes that the problem is open-ended/ambiguous	• Identifies the main purpose • Identifies relevant stakeholders and their possible goals/ preferences • Identifies relevant accounting knowledge, concepts and techniques	In addition to Stage 3: • Identifies important embedded, subsidiary problem(s)
Analyze	• Applies calculations, definitions, or other "textbook" concepts • Presents irrelevant information • Misinterprets calculation(s) and/or concept(s)	• Applies and describes the effects of relevant calculations and/or concepts • Partially analyzes alternatives, focusing on information supporting own viewpoint • Discounts other viewpoint(s)	• Thoroughly and objectively applies and interprets relevant calculation(s) and concept(s) • Explores causes, stakeholder effects and interrelationships • Questions the quality of information and assumptions • Thoroughly discusses the pros and cons of viable alternatives	• Objectively analyzes the most important relevant information, implications, consequences and viewpoints • Evaluates the quality of information and assumptions, and adapts interpretations (as needed) • Summarizes the most important pros and cons of viable alternatives
Conclude	• Instead of a conclusion, provides facts, definitions, or other "authoritative" statements	• Reaches a biased conclusion that is consistent with analyses	• Reaches no conclusion, or • Provides a conclusion with little or no justification	• Identifies/develops appropriate criteria, and uses the criteria to reach convincing conclusion(s) • If appropriate, provides value-added advice (e.g., identifies implementation issues)

Seattle Sandwich Short Case: Student #2

Classroom context: Student #2 was given the case as a take-home assignment and was told to write one paragraph.

My recommendation for next year's budget is that hourly labor costs should be fixed, rather than the past variable. If there needs to be a certain number of workers to do the production, then schedule as many workers as needed and do send them home early if they run out of work to do. This might make some good employees that are needed angry and quit. To avoid this, schedule less workers in the already known slow days, rather than just sending someone home. Also, if next year's budget is changed to fixed costs, the manager won't have to keep figuring out different totals—but instead have the same numbers to work with every time. This would allow more time for improving the production.

Comments about the approach and underlying thinking used by Student #2:

- Seems to believe it is easy to know how many workers are needed. Recognizes at least some uncertainty about sales volumes. Recognizes potential impact of work schedules on employee satisfaction. Implicitly recognizes the distinction between fixed and variable costs.
- Seems to believe managers can perfectly foresee when slow periods will occur (lack of uncertainty).
- Re-casts the problem from classifying labor costs to "correcting" management so that costs are always fixed. (Assumes—without supporting information—that management is not already scheduling fewer workers when work is expected to be slow.)
- Seems confused about what it means for costs to be classified in the budget versus the actual calculations of labor costs.
- Not clear who the student is talking about in the last sentence—the operations manager or production employees.

- Overall: The student seems to recognize that the cost classification is uncertain and provides arguments (some valid and some not valid) in favor of their conclusion.

Assessment of Student #2 Response (detailed ratings highlighted in yellow) Overall Rating: 2

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Identify	• Recites purpose as given, or • Identifies an inappropriate problem	• Identifies the clearly-evident problem • Recognizes that the problem is open-ended/ambiguous	• Identifies the main purpose • Identifies relevant stakeholders and their possible goals/ preferences • Identifies relevant accounting knowledge, concepts and techniques	In addition to Stage 3: • Identifies important embedded, subsidiary problem(s)
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Seattle Sandwich Short Case: Student #3

Classroom context: Student #3 was given the case as an in-class assignment and was told to write one paragraph.

There are many questions such as: How to treat overtime, which employees are benefited, are employees salaried or hourly, and how are benefit costs incurred and handled? Fixed costs are the simplest and least expensive to calculate. However, the fixed cost method may not be as accurate as variable cost method for budgeting. I would like to compare actual variable cost to budgeted variable cost for last year to estimate whether there is a potential for cost reduction by keeping more involved records.

Comments about the approach and underlying thinking used by Student #3:

- Does not explicitly identify the problem being addressed.
- Lists a number of questions that affect the classification, indicating that the student recognizes uncertainty (or, at least lack of sufficient information) about the classification.
- Uses evidence from the case to provide an argument for each classification. Implicitly demonstrates an understanding of the distinction between fixed and variable costs. Relates classification to the task at hand—budgeting.
- Does not provide a recommendation. Instead, begins to provide a strategy for obtaining additional relevant information—but then seems confused about how to use that information for classifying costs in the budget.

- Overall: Recognizes the validity of more than one conclusion, and goes farther by seeking specific additional information that might help reach a reasonable conclusion. However, seems reluctant to reach a conclusion without additional information.

Assessment of Student #3 Response (detailed ratings highlighted in yellow) Overall Rating: 2.5 (between Stages 2 and 3)

Component of Critical Thinking Model	Stage 1 Little/No Critical Thinking (Confused Fact-Finder)	Stage 2 Partial Critical Thinking (Biased Jumper)	Stage 3 Emergent Critical Thinking (Perpetual Analyzer)	Stage 4 Competent Critical Thinking (Pragmatic Performer)
Identify	• Recites purpose as given, or • Identifies an inappropriate problem	• Identifies the clearly-evident problem • Recognizes that the problem is open-ended/ambiguous	• Identifies the main purpose • Identifies relevant stakeholders and their possible goals/ preferences • Identifies relevant accounting knowledge, concepts and techniques	In addition to Stage 3: • Identifies important embedded, subsidiary problem(s)
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Seattle Sandwich Short Case: Student #4

Classroom context: Student #4 was given the case as an in-class assignment and was told to write one paragraph.

The costs of the labor should be both fixed and variable. The trick is determining minimal staffing levels. The managers, through experience and data, should decide on a minimum hours production employees should work or the manager could set a minimum number of employees needed regardless of sales volume. These costs for labor are fixed the rest are variable. The information that would be nice to have is staffing levels over time (#people/hours worked) to establish fixed staff level.

Comments about the approach and underlying thinking used by Student #4:

- Recommends treating the costs as mixed (but does not use that term).
- Identifies a key classification difficulty (i.e., implicitly recognizes uncertainty about the classification).
- Recommends a practical approach for managers to divide the cost between fixed and variable. The approach demonstrates an understanding of the distinction between fixed and variable.
- Does not address pros and cons. Instead, goes for a "solution" and focuses only on it.

- Overall: There are some hints in the paper of slightly higher-level thinking (perhaps Stage 4), but the student's thinking is not sufficiently presented. The lack of elaboration by the student makes the assessment of this paper unreliable.

Assessment of Student #4 Response (detailed ratings highlighted in yellow) Overall Rating: Unable to Rate

Component of Critical Thinking Model	Stage 1 Little/No Critical Thinking (Confused Fact-Finder)	Stage 2 Partial Critical Thinking (Biased Jumper)	Stage 3 Emergent Critical Thinking (Perpetual Analyzer)	Stage 4 Competent Critical Thinking (Pragmatic Performer)
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Seattle Sandwich Short Case: Student #5

Classroom context: Student #5 was given the case as a take-home assignment and was told to write approximately 1-2 pages, single-spaced.

To: [professor]
From: [Student]
Date: XXXXXX
Subject: Budget Recommendation for Treatment of Hourly Labor Costs

It is my recommendation that hourly labor costs be divided into two subgroups of fixed hourly labor and variable hourly labor costs in next year's budget to provide our company with more relevant information for future decision making purposes.

Fixed Costs Versus Variable Costs
In order to determine whether hourly labor costs should be treated as fixed costs or variable costs next year, I analyzed how these costs behave based on decisions made by operations management about production. Variable costs are costs that change proportionately with changes in production levels. Our total variable costs increase if our level of activity (production) increases, and decreases if our level of activity decreases.

By contrast, total fixed costs do not change based on small changes in activity levels. For example, the amount of electricity heat used to heat the production facility does not vary based on changes in activity levels. Additionally, my salary as an accounting intern is a fixed cost in that it also remains constant regardless of small changes in activity levels in our production facility. These are examples of items that comprise our total fixed costs, which remain constant despite small changes in levels of activity.

Production Hourly Labor Costs
Based on the above definitions of fixed and variable costs, hourly production labor costs seemingly have characteristics of each kind of cost, providing for uncertainty in how to treat the costs when budgeting.

The company pays hourly production labor costs based on the number of hours worked as determined by the production manager, who adjusts the schedule, or total number of production hours worked per week, based on sales volumes. Therefore, the number of hours that are worked (and thus cost to the company) change in accordance with the level of sales/production activity. In addition, the production manager may opt to send workers home early if production does not take as much time as expected.

However, it is unlikely that production activities would vary significantly from the operating manager's plan. It is additionally important to note that managers generally do not send workers home early for fear of losing quality staff members. Thus, the

number of hours worked by production workers does not change much from the schedule. It seems that at least part of the hourly labor costs is fixed.

Alternative Treatments

We have the options to either maintain the current treatment of hourly production labor costs as variable costs, change the treatment of such costs to fixed costs, or divide the hourly labor costs into variable and fixed and treat each as such.

As previously stated, it is my recommendation that the hourly labor costs be divided into two subgroups: fixed hourly labor and variable hourly labor. The minimum hours of labor required for the production schedule should be treated as fixed costs. The remainder of labor hours should be budgeted for based on variations in the projected sales and production volume. By dividing these costs, we will be able to project a more accurate budget that better predicts actual costs to our company in the upcoming year of operations. We will also be able to more readily determine how much labor costs actually do vary based on sales volumes and make adjustments to improve our use of efficient labor.

If all hourly labor costs are treated as fixed in next year's budget, it would likely require that we form strict policies for production to abide by in order to stay within budget. This may create a problem for us in that if sales increase, leading to an increase in required production levels, it will not be possible to increase the number of workers to accommodate, we may be sacrificing sales, production quality, and even lose some good staff. Such strict labor budgeting may hinder growth. The upside of treating these costs as fixed is that we may avoid paying for some of the unnecessary hourly costs that we expense currently because we will be forcing the operating manager to carefully budget production hours.

If we continue treating these costs strictly as variable, we can budget for these costs based on our estimated sales/production volume and provide for growth or decline in sales and production. It is likely that if sales increase, we will need to incur additional costs such as hourly labor to accommodate that growth. If these costs are able to change with sales volume, we will be providing a more accurate budget.

Quality Information in Budgeting

In any case, it is difficult to determine how to budget for hourly production labor costs because the future involves uncertainty. We cannot know whether sales volumes will be growing or declining except to base our predictions on past information, the current state of the market and consumer demand, and the current state of our company. Each of these factors was not provided, thus not considered in my analysis. Each are certainly additional information I would like to obtain in order to provide you with a more complete analysis of how to account for hourly labor costs in next year's budget.

Comments about the approach and underlying thinking used by Student #5:

- Clearly states conclusion and primary criterion
- Clearly acknowledges alternative treatments. Describes the distinction between fixed and variable costs, using appropriate examples.
- Relates discussions to the task at hand—budgeting.
- Provides a range of relevant information from the case as evidence that there is more than one potential classification. This indicates an understanding that uncertainties exist.
- Provides recommendation, using arguments to support conclusion. Links the recommendation clearly to the underlying purpose—budgeting. Does not provide a con for the recommended solution (suggesting bias).
- Makes the unstated assumption that the budget commits managers to incur costs in a particular way. The student seems unaware that this assumption may not be valid and drives his/her conclusions.
- Provides both pros and cons for the variable cost alternative, but seems mono-focused on uncertainty about sales growth.
- Appropriately cites sales volume uncertainty as a reason for needing additional information, but is vague about how additional information might be gathered and used.

- Overall: Demonstrates ability to consider uncertainties, pros and cons. However, the student adopts (unstated) simplifying assumptions that drive conclusions. Specifically, the student seems to lack a sufficient understanding of the difference between budgets and actual operations.

Assessment of Student #5 Response (detailed ratings highlighted in yellow) Overall Rating: 2.5 (between Stages 2 and 3)

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Seattle Sandwich Short Case: Student #6

Classroom context: Student #6 was given the case as a take-home assignment and was told to write approximately 1-2 pages, single-spaced.

Fixed v Variable. Fixed costs do not vary with changes of activity within the relevant range. On the other hand, variable costs do change proportionally with activity level.

Company Situation and Purpose(s). Uncertainties regarding how to treat labor costs arise because of information not given in the case. In particular, it is not clear what question is most important to the company. Does the company care most about cost savings, or ease of accounting, or something else? A company in serious financial difficulty might make a different decision than a company with generous resources. Without a clear picture of the most important cost driver/object, it is much more difficult to make an appropriate choice. More requests for information follow in in the discussion below.

Alternative Treatments. Seattle Sandwich has three options in classifying its production wage expense. It can treat labor as fixed, variable or mixed—a combination of fixed and variable. If it treats all labor costs as fixed, then the company benefits from reducing accounting paperwork, and the company is more likely to always maintain adequate staff levels to achieve needed production levels. On the other hand, this method does not motivate the operating manager to aggressively control this cost and labor costs could become higher than necessary.

Treating all labor costs as variable would encourage the production manager to control costs, but also contains drawbacks. For example, it may disenfranchise employees or lead to understaffing which would result in poor production quality.

Finally, treating labor costs as mixed involves more estimates and calculations than either of the previous methods. However, it may more accurately reflect the existence of the fixed and variable components of the production labor costs.

Recommendation. I believe that the most accurate accounting treatment is to consider hourly labor wages a mixed cost. The staffing required to achieve minimum production levels should be treated as a fixed cost. These fixed costs will vary with the number of sandwiches produced (i.e., with sales). The budget would then treat the extra labor for higher-than-normal volumes as a variable cost. This cost would then change appropriately with sales activity. This method encourages the operating manager to control the extra cost of additional labor hours and provides useful information for the cost drivers of sales volume.

In my opinion, classifying all costs as either fixed or variable ignores that both components are present in this situation.

Additional Information. There is a wide variety of information that would be useful in making a more accurate decision. Perhaps the most important piece of missing information is the business strategy. Is Seattle Sandwich trying to differentiate itself on price or quality? If low price is its competitive strategy, then variable costs might be most appropriate. The operating manager would then have an incentive to reduce labor—perhaps by reducing production quality. If the company is focused on quality, then it can ill afford to be understaffed or to lose trained and motivated employees. It might then be better off treating wages as fixed and ensure that it always maintains a generous amount and quality of labor.

In addition to the strategic direction of Seattle Sandwich, it would be useful and relevant to know the materiality of the decision. If the variation of production labor hours is not significant, then the actual treatment doesn't matter as much and the company should select fixed treatment, which is the simplest and least labor-intensive.

As was mentioned above, knowledge of the budget's purpose and the responsibilities of managers would be useful. I made the assumption above that the production manager doesn't control sales orders, but this may not be correct. If the production manager is going to be responsible for the production budget, it must reflect the items that the manager can actually exercise control over.

Finally, other details such as the cost of hiring, training and replacing workers could be useful. This would make it easier to determine whether to risk employee dissatisfaction by treating labor as variable and thus encouraging the operating manager to continually tweak work schedules.

Comments about the approach and underlying thinking used by Student #6:

- Clearly acknowledges 3 alternatives.
- Focuses on uncertainties related to lack of information in the case rather than on inherent uncertainties about the cost classification itself. However, demonstrates a sophisticated knowledge of uncertainties regarding management goals, which is important to the budgeting task.
- Provides at least one pro and one con for each alternative. Implicitly prioritizes the relevant information in the case by focusing on pros and cons related to the goals of management—what the company would like to achieve through its budgeting process.
- Clearly and logically explains reasons for recommendation.
- Identifies and links recommendation to two key goals—budget accuracy and motivating desirable manager behavior. However, does not clearly articulate trade-offs made with other potentially important factors.
- Provides arguments for alternative cost classifications under different long-term business strategies. This suggests the ability to evaluate the problem objectively, to weigh factors differently under different circumstances, and to consider long-term issues.

- Articulates key assumption made and describes its impact on recommendation. Acknowledges uncertainty about the assumption.
- Provides additional factors that might influence decision, and demonstrates that relevant information in the case that was not explicitly discussed above was not ignored.

- Overall: Addresses a range of pros and cons, and then applies strategic priorities of the company to generate a recommendation.0

Assessment of Student #6 Response (detailed ratings highlighted in yellow) Overall Rating: 4

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